

WHAT IS CLAIMED IS:

1. A safety device for an occupant sitting in a vehicle seat comprising:
an airbag positioned to deploy between the head of the occupant and a head restraint of the seat, wherein the airbag includes a main airbag in fluid communication with a secondary airbag;
wherein the secondary airbag is configured to substantially fill with inflation gas before the main airbag fills with inflation gas, and wherein the airbag is configured so that when the secondary airbag inflates the main bag is positioned between the head restraint and the neck and nape area of the occupant so that the main bag inflates to bend the head and the neck of the occupant toward the chest.
2. The device of claim 1, wherein the secondary airbag has two tubular positioning cushions which are connected with the main airbag so that, upon inflation of the positioning cushions the positioning of the main airbag takes place.
3. The device of claim 2, wherein the two tubular positioning cushions are configured so that during inflation the cushions deploy laterally from the area of the car seat on the left and right of the occupant's head toward the roof of the vehicle and draw the main airbag into a position between the head restraint and the occupant's head.
4. The device of claim 2, wherein the two tubular positioning cushions are connected by a middle cushion which upon inflation deploys in the area between the head restraint and the occupant's head.
5. The device of claim 4, wherein the thickness of the middle cushion is so small that, when the secondary airbag fills with gas, the occupant's head is moved only slightly forward in the direction of forward travel of the vehicle.

6. The device of claim 4, wherein the middle cushion is configured to have a thickness after inflation that causes movement of the occupant's head no more than 15 cm in the direction of forward travel of the vehicle.
7. The device of claim 2, wherein each of the positioning cushions include a lower portion which at least when in the inflated state is disposed at the level of the occupant's neck and head area and extends from the driver's seat toward the vehicle roof, and an upper portion, which at least in the inflated state is disposed above the occupant's head area and is angled forward in the direction of travel with respect to the lower portion.
8. The device of claim 4, wherein the two positioning cushions are joined together in their lower portion by the middle cushion and in their upper portion by the upper portion of the main airbag.
9. The device of claim 7, wherein the length of the upper portion of the positioning cushions is sufficient to shield the occupant from the roof rail of the vehicle.
10. The device of claim 7, wherein the upper portion of the main airbag is configured as a chute so that the passenger's head is guided along a path as the main airbag deploys toward the vehicle roof.
11. The device of the claim 8, wherein the fluid connection between the main cushion and the secondary cushion is provided by two connecting ports.
12. The device of claim 11, wherein two connecting ports connect the main airbag to the two positioning cushions.
13. The device of claim 2, wherein the two positioning cushions are configured to

expand further than the middle cushion in the direction of forward travel of the vehicle.

14. The device of claim 4, wherein the secondary airbag comprises:
two substantially identical airbag layers, each layer having an axis of symmetry, wherein the two layers are joined together at their outer margin, and
at least two strip-like connecting portions connecting the two airbag layers and subdividing the secondary airbag into three portions, wherein the middle portion forms the middle cushion and the two outer portions form the positioning cushions, and wherein the secondary airbag is configured so that the middle cushion and the two lower portions of the positioning cushions are arranged substantially parallel to the mirror-image axis, while the two upper portions of the positioning cushions are turned at a given angle perpendicular to the axis of symmetry.

15. The device of claim 14, wherein the given angle is approximately 45 degrees.

16. The device of claim 14, wherein the two strip-like connecting areas connecting the two airbag layers are each formed by a connecting seam.

17. The device of claim 14, wherein the two airbag layers are bonded together at their outer edges.

18. The device of claim 14, wherein the two airbag layers are joined to one another at least partially near the axis of symmetry thereby forming two tubular middle ducts in the middle cushion.

19. The device of claim 18, wherein the middle ducts merge conically toward one another in their upper end area.

20. The device of claim 19, wherein the margin of the two airbag layers is at least

partially of wavy shape in the upper portion of the middle cushion.

21. The device of claim 1, wherein the main airbag includes two airbag layers which are joined together at their outer margin and the main airbag is subdivided into a lower cushion portion and an upper cushion portion, the upper cushion portion being subdivided by two strip-like connecting portions joining together the two airbag layers and creating three tubular portions which form the chute of the main airbag.

22. The device of claim 21, wherein the two strip-like connecting portions are formed in each case by sewing and/or bonding.

23. The device of claims 21, wherein the two airbag layers are sewn and/or bonded together at their outer margin.

24. The device of any of claims 21, wherein the two inside margins of the upper portion of the positioning cushions and the lateral upper margin of the main cushion are joined together by sewing and/or bonding.

25. The device of claim 24, wherein the two strip-like connecting areas in the upper cushion portion of the main airbag lead each into a circular seam and the main airbag and the secondary airbag are disposed to one another so that, in the at least approximately inflated state of the main and secondary airbag, the middle ducts of the secondary airbag are disposed between the passenger's head and the two seams and shield the seams from the head.

26. The device of claim 24, wherein the lower cushion portion of the main airbag has a curved seam that determines the thickness and the shape of the main airbag as regards the desired bending of the occupant's neck and head.

27. The device of claim 1, wherein the airbag is stored in a container that includes

a ramp to ensure that the airbag deploys forwardly upon inflation.

28. The device of claim 4, wherein the middle cushion of the secondary airbag is made stronger, substantially in the area deploying between the head restraint and the upper end of the occupant's seat, in comparison to the remaining area of the middle cushion.

29. The device of claim 2, wherein the secondary bag is secured to the vehicle seat at two fastening points, wherein the fastening points are located at the bottom outer margins of the positioning cushions.

30. The device of claim 1, wherein the main airbag and the secondary airbag are connected together by adhesive.

31. The device of claim 1, wherein the safety device is configured to inflate the airbag in the event that the rear-end of the vehicle is collided with by a second vehicle having a velocity that exceeds the velocity of the vehicle by more than a predetermined amount.

32. The device of claim 30, wherein bonding areas between airbag layers and between the main and secondary airbags are filled at least partially by silicone adhesives.